REMARKS

This response responds to the Office Action dated July 13, 2005 in which the Examiner rejected claims 1-4, 6, 10, 12-16 and 22 under 35 U.S.C. §102(e), rejected claims 8-9, 11 and 16 under 35 U.S.C. §103 and stated that claims 5, 7 and 20-21 would be allowable if rewritten in independent form.

Claim 1 claims a dry forming apparatus comprising a mold-transfer mechanism, a pressing driving mechanism, a connecting mechanism and a unit holding mechanism. The mold-transfer mechanism is for transferring a mold support plate, containing a die and lower punch units, at least between a powder supply stage, a pressing stage, and a formed-product removing stage. The pressing driving mechanism, having upper punch units which are not transferable between stages, is for driving the upper and lower punch units for pressing in the pressing stage. The connecting mechanism is for connecting lower punch units to the pressing driving mechanism when the mold support plate is transferred to the pressing stage, and is for releasing the connection of the lower punch units. The unit holding mechanism is for holding the lower punch units while the lower punch units are transferred to the next stage.

Through the structure of the claimed invention having a) a press driving mechanism driving (both) upper and lower punch units for pressing in a pressing stage, b) a connecting mechanism for connecting lower punch units to the press driving mechanism when the mold support plate is transferred to the pressing stage, and for releasing the connection of the lower punch units and c) a unit holding mechanism for holding the lower punch units while the lower punch units are transferred to the next stage, as claimed in claim 1, the claimed invention provides a

dry forming apparatus in which positional accuracy and height accuracy of the punch units during forming can be enhanced while being able to handle different types of formed products. The prior art does not show, teach or suggest the invention as claimed in claim 1.

Claims 1-4, 6, 10, 12-16 and 22 were rejected under 35 U.S.C. §102(e) as being anticipated by *Tokita* (U.S. Patent No. 6,881,048).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §102(e). The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

Tokita appears to disclose method and apparatus for automatically loading powder material into a mold (col. 1, lines 7-9). The loading apparatus 10 comprises a frame 11 (shown extending in horizontal direction in FIGS. 2 and 3), a sintering mold dispenser unit 12 provided at one end (the right-hand end in FIGS. 2 and 3) of the frame 11, a powder filling system including a plurality of powder filling mechanisms 14 arranged in line along the length of the frame 11, a measure unit 16 provided on the frame 11 and located next to the powder filling system, a press unit 18 constructed separately from the frame 11 and located next to the left-hand end of the frame 11, a take-out unit 20 for taking our or picking up and sending a sintering mold, and a sintering mold conveyor system 22 (not shown in FIG. 2 nor FIG. 3) for conveying a sintering-mold-and-tray (i.e., a sintering mold together with a tray on which it is placed) from the sintering mold dispenser unit 12 to the press unit 18. Thus, in this embodiment, a sintering mold a1 is conveyed together with an associated tray J on which the sintering mold a1 is placed (col. 8, line 66 through col.

9, line 15). A lift plate 233 is provided between the mount plate 232 and the receiving plate 230. The lift plate 233 has four bearing sleeves 233a fixedly mounted thereon, for receiving the respective vertical posts 229, such that the lift plate 233 is guided by the vertical posts 229 for vertical displacement. The lift plate 233 further has a push-up member 234 fixedly mounted on the top surface thereof, for pushing up the lower press core e fitted in the sintering mold a1 carried by the tray J on the receiving plate 230 (col. 9, line 66 through col. 10, line 7). In operation, when the press unit 18 is in a condition to wait for a sintering mold to arrive, the press guide 185 having the upper plunger 186 mounted thereon is placed at its upper position by means of the hydraulic cylinder 187, while the lift cylinders 188 are controlled such that their piston rods 188a are in their retreated position. When the carrier 223 arrives at the pressing position of the press unit 18, the pedestal 183 is received in the recesses 224',232' and 233' of the base plate 224, the mount plate 232 and the lift plate 233, respectively, while the cylindrical stem portion of the push-up member 234, the drive motor 235, the central portion 232a of the mount plate 232 and the central portion 233a of the lift plate 233 together enter the inside space of the pedestal 183 through the cutout 191. When the carrier 223 has reached the pressing position, the axis of the push-up member 234 is substantially in alignment with the axis of the pedestal 183 and the top flange 234b of the push-up member 234 extends above the top edge of the pedestal 183. Then, the lift motor 239 is operated to lower the receiving plate 230 of the carrier 223 and thus lower the tray J on which a sintering mold a1 is placed, until the under surface of the top flange 234b of the push-up member 234 come into engagement with the top of edge of the pedestal 183, when the top surface of the top flange 234b remains in contact with the bottom

surface of the lower press core e fitted in the sintering mold, so that the sintering mold a1 is thereby supported with the lower press core e fitted therein and the amount of powder material filled therein. Then, the hydraulic cylinder 187 is operated to lower the press guide 185 and the upper plunger or press member 186 along the columns 182, so that the powder material filled into the sintering mold is pressed by the upper plunger 186 at a desired pressure and for a desired length of time (col. 16, lines 14-46).

Thus, *Tokita* merely discloses using an upper plunger 186 to press the powdery material while the pedestal 183 merely holds a push-up number 234 during the pressing and is not driven. Thus nothing in *Tokita* shows, teaches or suggests a press driving mechanism for driving (both) the upper and lower punch units for pressing in the pressing stage as claimed in claim 1. Rather, *Tokita* merely discloses only the upper plunger 186 presses the powder material (col. 9 lines 9-16, col. 10, lines 4-7, col. 16, lines 32-46).

Additionally, nothing in *Tokita* shows, teaches or suggests a) a connecting mechanism for connecting lower punch units to the pressing driving mechanism when the mold support plate is transferred to the pressing stage, and for releasing the connection of the lower punch units and b) a unit holding mechanism for holding the lower punch units while the lower punch units are transferred to the next stage as claimed in claim 1.

Since nothing in *Tokita* shows, teaches or suggests a) a press driving mechanism for driving both the upper and lower punch units for pressing, b) a connecting mechanism and c) a unit holding mechanism as claimed in claim 1,

Applicants respectfully request the Examiner withdraws the rejection to claim 1 under 35 U.S.C. §102(e).

Claims 2-4, 6, 10, 12-16 and 22 depend from claim 1 and recite additional features. Applicants respectfully submit that claims 2-4, 6, 10, 12-16 and 22 would not have been anticipated by *Tokita* within the meaning of 35 U.S.C. §102(e) at least for the reasons as set forth above. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 2-4, 6, 10, 12-16 and 22 under 35 U.S.C. §102(e).

Claims 8-9 were rejected under 35 U.S.C. §103 as being unpatentable over *Tokita* in view of *Nakagawa et al.* (U.S. Patent No. 5,647,410). Claim 11 and 16 were rejected under 35 U.S.C. §103 as being unpatentable over *Tokita* in view of *Shapiro* (U.S. Patent No. 3,677,673).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to claims and allows the claims to issue.

As discussed above, since nothing in *Tokita* shows, teaches or suggests the primary features as claimed in claim 1, Applicants respectfully submit that the combination of the primary reference to *Tokita* with the secondary reference to *Nakagawa et al.* or *Shapiro et al.* will not overcome the deficiencies of the primary reference. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 8-9, 11 and 16 under 35 U.S.C. §103.

Since objected to claims 5, 7 and 20-21 depend from allowable claims, Applicants respectfully request the Examiner withdraws the objection thereto.

Thus, it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested. Should the Examiner find that the application is not now in condition for allowance, Applicant respectfully requests the Examiner enters this response for purposes of appeal.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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